IJIRCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 11, Issue 6, June 2023

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

Impact Factor: 8.379

International Journal of Innovative Research in Computer and Communication Engineering

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 |

|| Volume 11, Issue 6, June 2023 ||

| DOI: 10.15680/IJIRCCE.2023.1106063 |

E-AUCTION SYSTEM WEB APPLICATION

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ABSTRACT: Recent research has made clear the spread and the influence of user-generated comments and, thus, the need for sophistication in handling it. Review credibility has two main components: trustworthiness (which equates to honesty or sincerity) and expertise (which equates to accuracy). Prior research also shows the effects of valence (positivity or negativity) in reviews, noting that negative reviews have more influence than positive reviews on readers' perceptions of review credibility and purchasing decisions. Methodology: We tested the effect of a consumer review's environment (brand or retailer site) and the effect of review valence (positive or negative) on the perceived credibility of that review, as well the degree of correlation among credibility, trustworthiness, and expertise. Through an online survey, we exposed respondents to the same review text with different star ratings (4-star and 2-star) in two types of sites: brand and retailer. We asked participants to evaluate the review's credibility, trustworthiness, and expertise. In half of the exposures, participants evaluated a review in the site of a high-credibility company (Apple or Amazon), and in the other half of exposures, participants evaluated a review in the site of a midlevel-credibility company (Dell or Wal-Mart). Results and conclusions: Credibility strongly correlated with both trustworthiness and expertise. Participants rated 4-star reviews as more credible than 2-star reviews on high-credibility sites, but star ratings had no impact on midlevel credibility sites. We found no difference between ratings of reviews displayed on brand and retailer sites for midlevel-credibility companies but a small difference between reviews displayed on brand and retailer sites for high-credibility companies. Professional communicators should attend to reviews posted both to retailer and brand sites.

KEYWORDS*:* Proof of irretrievability (POR), price of products (HP), starting price (SP), Ending price of the product in the previous bidding (PEP), Starting price of the product in the previous bidding (PSP), Proof of Irretrievability (POR).

I. INTRODUCTION

Data outsourcing to cloud storage servers is raising trend among many firms and users owing to its economic advantages. This essentially means that the owner (client) of the data moves its data to a third party cloud storage server which is supposed to - presumably for a fee - faithfully store the data with it and provide it back to the owner whenever required.

As data generation is far outpacing data storage it proves costly for small firms to frequently update their hardware whenever additional data is created. Also maintaining the storages can be a difficult task. Storage outsourcing of data to cloud storage helps such firms by reducing the costs of storage, maintenance and personnel. It can also assure a reliable storage of important data by keeping multiple copies of the data thereby reducing the chance of losing data by hardware failures.

Storing of user data in the cloud despite its advantages has many interesting security concerns which need to be extensively investigated for making it a reliable solution to the problem of avoiding local storage of data. In this paper we deal with the problem of implementing a protocol for obtaining a proof of data possession in the cloud sometimes referred to as Proof of irretrievability (POR).This problem tries to obtain and verify a proof that the data that is stored by a user at a remote data storage in the cloud (called cloud storage archives or simply archives) is Not modified by the archive and thereby the integrity of the data is assured.

II. LITERATURE SURVEY

In this paper [3], As professional communicators know, no communication occurs in a vacuum; all communication has context, an environment. This environment can critically influence how receivers interpret a message and whether they

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decide to act on it. Authors in [2] , Online product reviews—a type of user-generated content—appears in several environments: personal blogs such as Computeraudiofile.com that are dedicated at least in part to reviews, online publications such as ZDNet.com that include reviews, independent review sites such as Yelp.com, retailer sites such as Amazon.com, and brand sites such as Apple.com. Authors in [4], Despite the fact that product reviews are environmentally situated, most research on user-generated product reviews has overlooked the extent to which a product review's environment affects users' perceptions of that review's credibility, defined here (and elsewhere, as the extent to which users take the review's message seriously. In this paper [6], in the research requires attention from professional communicators: if review users' perceptions of credibility vary according to a review's environment, then professional communicators who are charged with analyzing and managing their organizations' user-generated content will want to create and maintain review environments that lend and sustain credibility.

III. PROPOSED SYSTEM

Recent research has made clear the spread and the influence of user-generated comments and, thus, the need for sophistication in handling it. Review credibility has two main components: trustworthiness (which equates to honesty or sincerity) and expertise (which equates to accuracy). Prior research also shows the effects of valence (positivity or negativity) in reviews, noting that negative reviews have more influence than positive reviews on readers' perceptions of review credibility and purchasing decisions. Users themselves are starting the conversation, figuring out alternate ways for getting tasks done, and troubleshooting issues that they encounter. And they're sharing their experience and expertise without expecting anything in return.

Advantage of Proposed System

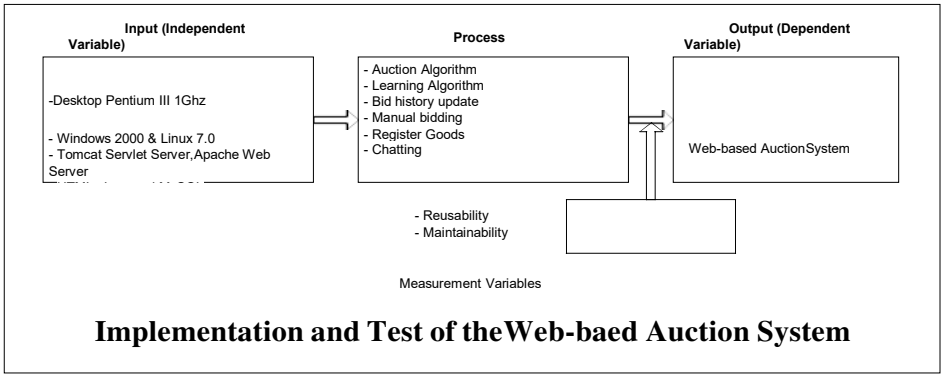
- Millennial spend more than five hours per day with peer-created media.
- Millennial find user-generated content 35% more memorable than other media (including traditional media such as television).
- Millennial trust user-generated content50% more than other media.
- Millennial find user-generated content20% more influential on their purchase.

IV. SYSTEM METHODOLOGY

Developing an online auction system requires making decisions and selecting technologies to support those decisions. Some background information and related research on the technologies that we employed are presented here.

- **Component-based programming:-**

Component-Based programming enables fast deployment of maintainable software by reusing prefabricated components that are independent executable units. Individual components can be custom-made to meet new requirements and can be rearranged in different compositions. Reusability and Maintainability are the two main advantages of component-based programming. Components are highly reusable units of functionality and they let developers conceptualize software as



Implementation and Test of theWeb-baed Auction System

inter- connectable blocks. Research topics in this area include design of component integration frameworks to prescribe an architecture that permits flexible composition of third-party components into applications, web design reuse vis-à-vis code reuse, and reusability of components for quality software.

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We implemented the auction system using component based programming for easy maintenance as well as convenient reuse of these components. Three reusable components were developed – Method of Bidding, Certification and Registration Good Components, each handling specific and well-defined functions in the auction system.

➢ **Auction systems:-**

Auction systems are a major component of the electronic marketplace that allow users at any site to sell and buy products. The sellers set up auctions for their products while the purchaser who bids the highest amount wins the right to purchase the product in an auction.

In considering the above studies, we used an agent- based approach for our implementation. We used three kinds of agents – Purchaser Agent, Seller Agent and Facilitator Agent. The Seller Agent provides the function of registering goods for an auction to the sellers. This design maximizes the probability that the product auctioned will sell. The second agent is the Purchaser Agent that requires bidding to buy and it suggests a proper bidding price by analyzing the bidding history of the bidding competitor. The third agent is the Facilitator Agent that plays the roleof an auctioneer and enables a bidder to look at the other person's auction history while bidding for and buying a product.

V. COMPONENTS AND ALGORITHMS

The different components and the algorithms used in the auction system are detailed in this section. The algorithm of primary concern here is the one that the Purchaser Agent uses to calculate the bidding price to be suggested to the purchaser.

➢ The Certification component is used to validate the user trying to log into the system.

➢ A seller enters products into the system by using the

➢ Registration Good component. At this time, the seller inputs an end date and time of auction, including the starting and end prices of products.

➢ Purchaser and Seller components manage information related to the auctions of the purchaser and the seller, as well as their private information.

➢ The Negotiation component manages the auction. If a bidder arrives at the time of the auction close or a bidder who suggests the highest price exists, the auction will be closed. When an auction closes, the data record of the auction transfers to the Management History Auction component.

➢ The Management History Auction component showsthe previous auction record of the auctioneer conducting the current auction.

➢ The Data Base component saves the relevant data pertaining to the current auction (e.g. the price ofproducts and contents) separately in the database.

➢ According to the three kinds of bidding methods (Speed, Medium, Leisure), a purchaser decides the next bid after confirmation of the end price that has been suggested so far from the Data Base component using the MethodofBidding component. Of the eight components developed, the Certification, Registration Good and MethodofBidding components are particularly useful and can be easily adapted for reuse in other systems.

➢ **Calculating bidding price.** This subsection outlines the algorithm used by the Purchaser Agent to suggest a bid price to a purchaser that would maximize his chances of making a successful bid. There are three possible rates at which a purchaser may choose to bid – Speed, medium or Leisure.

K is the amount of money that can be bid at the present auction's starting price. Equation 1 calculates the difference between the highest forecast-price of products (HP) and the seller's suggested starting price (SP). PABC is the average amount of the previous total bidding prices that the bidder has bid. Equation 2 calculates the ratio of the difference between the ending price of the product in the previous bidding (PEP) and the starting price of the product in the previous bidding (PSP) with the difference between PEP and the average bidding price of products in the previous bidding (PB). Equations 3 through 5 are the prices that are suggested eventually depending on the respective method of bidding chosen.

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K = (HP – SP).....(1)

PABC = (PEP – PSP) / (PEP – PB).....(2)

Speed = (K/PABC)*1.2 .....(3)

Medium = (K/PABC)*1.....(4)

Leisure = (K/PABC)*0.8 .....(5)

Bidding method formulae

K = (HP – SP).....(1)

PABC = (PEP – PSP) / (PEP – PB).....(2)

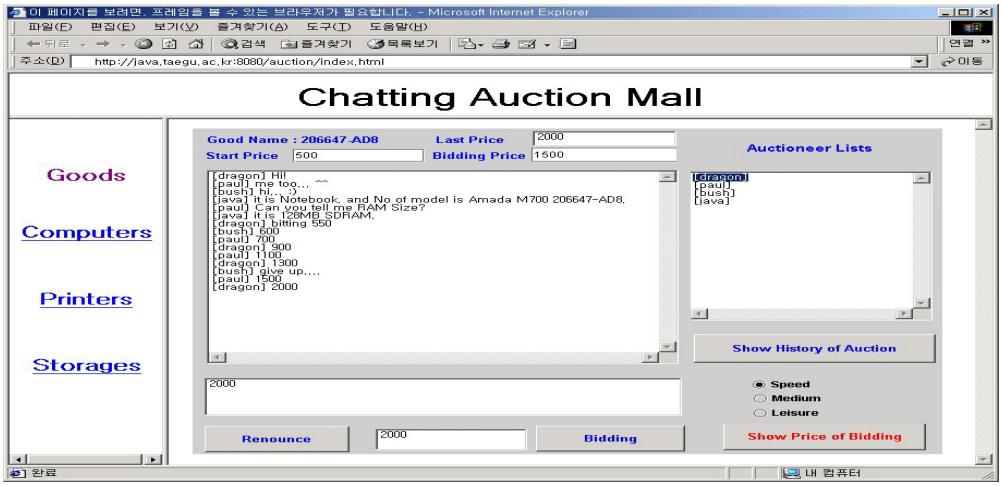

Fig. 5.1. Chatting Auction Review

VI. SYSTEM IMPLEMENTATION

This section lays out the artifacts of our study as wellas the implementation which followed the system analysis and design. The details of system configuration and analysis of the result of the empirical study are presented.

Configuration / implementation environment - The Seller and the Purchaser (who connect through their respective web browsers) are connected to the Auction Web Server. The Auction Web Server communicates with the Chatting Auction Daemon through JAVA/Servlet/EJB and with the Database through JDBC. The developed auction system is interactive.The environment used for implementation was a desktop Pentium III 1GHz, with Windows 2000 and Linux 7.0 as Operating System. We also used Tomcat as Servlet Server and Apache as Web Server. Further, we also use HTML, Java, and MySQL software.

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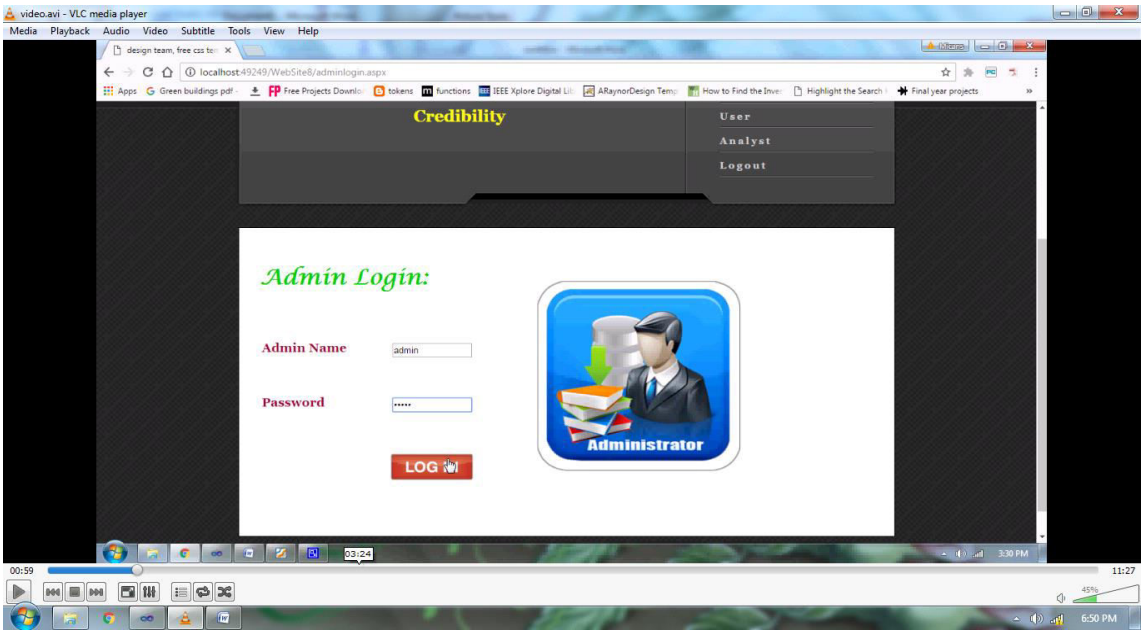

Fig. 6.1. Enter Product

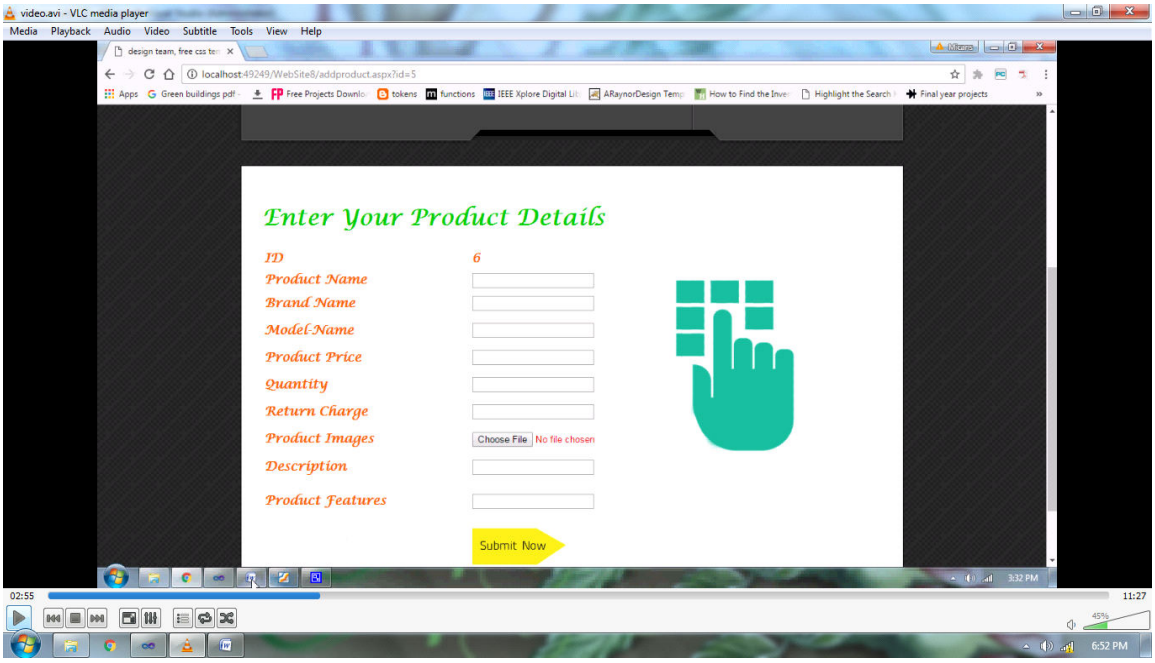

Fig. 6.2. Customers Buying Product

Processing procedure of system:-

The implemented auction system can be accessed simultaneously as a dynamic collaboration by several objects on the Internet. The execution of the auction system proceeds as follows.

- Select "Computer" item on left frame after Login.
- If we select "Notebook" on the next screen, the Chatting screen is displayed as shown in Figure 9.
- If we select a part applicable in "Speed or Medium or Leisure" during the auction, and click on "Show Price of Bidding" button, it displays the next bid price.
- When we want to see the auction records of the other bidders during the auction, we can choose the auctioneer and click the button "Show History of Auction" and the auction history for that particular bidder is displayed.

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- Once the last successful bidder has been decided, the
- Contract price is displayed on the screen and the auction is finished.
- The record of the conversation, which occurs between the bidder and seller or the system, is stored in the Database. Also, all records of the conversation, which occur during the course of the auction, are added in the record for the people who participated in the auction, stored in the Database.

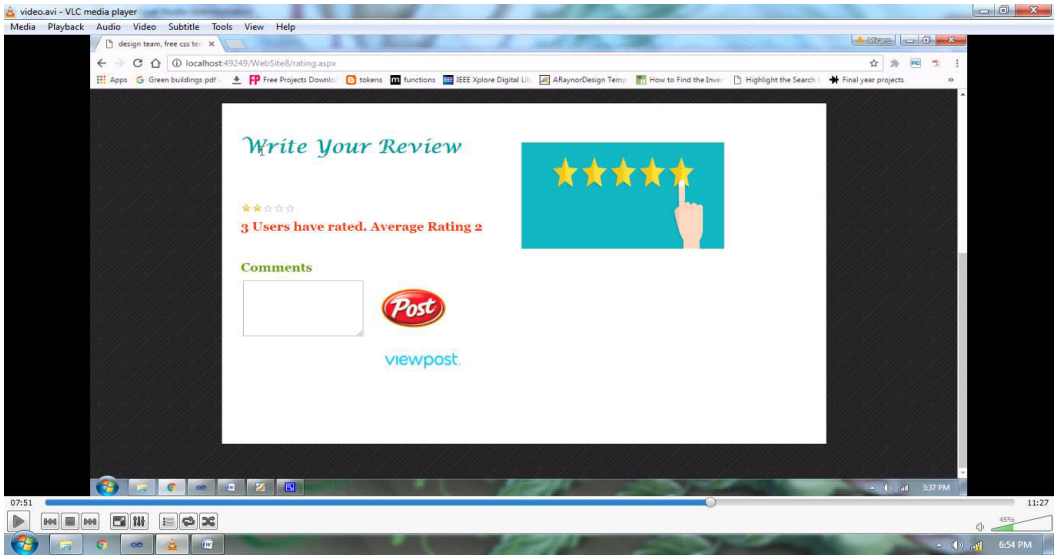

Fig. 6.3. Review Reportage

Analysis of results - We successfully implemented the web-based auction system using UML and components. The rigorous design and analysis phase and the robust component-based implementation enabled us to achieve a minimal defect rate in the final product. The defect rate of our reused code was 0.9 units per 1KLOC(0.9/1KLOC).

The scope of implementation and identification of entities that could be coded as reusable components was done with the help of UML. Further, because the system was designed using UML, any additions/modifications to the system design was easily facilitated. From the eight components we developed – (1) Certification component, (2) Registration Good component, (3) Method of Bidding component and, (4) Purchaser component – are all easily reusable with little or no modification necessary. The Certification component that was used to certify if a user is a registered user will find wide-use applicability. The Registration Good and MethodofBidding components can be easily modified to include different attributes for registering a product or for different frequencies of bidding respectively. The Purchaser component suggests an estimated amount to bidders by learning the bidding record which the other bidders have suggested before. Moreover, it can suggest better estimated bidder price by using experiments that are accumulated like this. Thus, the use of component-based programming improved themaintainability and reusability of the system.

VII. FUTURE ENHANCEMENT

This paper described a case study highlighting the best practices in designing and building a web-based auction system. We designed the auction system using UML. The Use Case Diagram, Sequence Diagram, Class Diagram and Component Diagram offered by UML were used successfully during the process. Rational Rose, used for the purpose, provided adequate support. Our implementation, with its basis in component-based programming enabled us to develop a highly maintainable system with a number of reusable components. Further,the system used intelligent agents that permitted fair help to bidders participating in auctions, and at the same time, achieved maximum profit for the seller. Again, the implementation environment and the tools used, provided excellent support for the successful development of the system.

The approach outlined here was more effective in implementing our auction system than the existing Information Engineering (data-oriented), Structured Development (function-oriented), or Object-oriented (data-oriented and function-oriented) methodology. Although we only made a few specific changes to the components, these changes indicate that subsequent changes to other system components will be straightforward. Consequently,

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the reusability of the system was facilitated and, as a direct result, we expectthat the system will be easily able to suitably evolve in the fast changing Internet environment.

Our plans for future work include the (re)implementation of the auction system using Object-Z [25] for formal specification and mathematical algorithms like VCG (Vickrey-Clarke-Grove, Multidimensional). Object-Z is an object-oriented formal specification language that is based on Z, and has been developed at the University of Queensland, Australia. Extensions to the semantics of Z include implicit support for object identity, together with notions of inheritance and polymorphism. Further, we plan to develop additional algorithms that can be used for analyzing the other competitive bidder's expectation price. We then plan to compare the results, in terms of defect rate and degree of maintainability andreusability achieved, from these two different approaches.

VIII. CONCLUSION

We first verified the findings of prior research on credibility and its components: trustworthiness and expertise. We too found that credibility, trustworthiness, and expertise are strongly correlated. With this finding in hand, we focused on credibility. Implications for Research and Theory: Overall, we found that the perceived credibility of a review is little changed by the context of its site environment—brand or retailer. Review readers may determine credibility mainly through the text of the review as opposed to having the site environment influence their perceptions. While our current study did not directly compare high-credibility sites to midlevel-credibility sites, future research could compare high-level and midlevel-credibility companies, as well as low-credibility companies in order to determine the extent to which a company's credibility transfers

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| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 |

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